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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,635	09/06/2000	Ismayil M. Guracar	2000P82261 US	1723

7590

05/06/2002

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INTELLECTUAL PROPERTY  
DEPARTMENT

EXAMINER

JAWORSKI, FRANCIS J

ART UNIT

PAPER NUMBER

3737

DATE MAILED: 05/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

INTELLECTUAL PROPERTY  
REC'D.  
PD 2000P82261US  
FILE DATE 8-6-02

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INTELLECTUAL PROPERTY DEPT.  
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**Office Action Summary**

Application No.

09/657,635

Applicant(s)

GURACAR ET AL.

Examiner

Jaworski Francis J.

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

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***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Applicants are claiming a sequence. The Examiner is interpreting this as the claiming of a format, neither structure nor the method of implementing the format, nor a software-resident on computer-readable medium for effecting a format, but rather the abstraction of a format in and of itself.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11 - 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark [REDACTED] in view of Poland [REDACTED].

The former is directed to interleaved collateral transmissions as per col. 2 line 3 - col. 4 line 5 and/or as supplemented col. 4 line 9 - col. 6 line 8. It would have been obvious in view of the

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latter to use the system of the Clark face figure in association with contrast agent imaging (Fig. 1 and col. 11 lines 36-43 and col. 11 lines 55-58 of Poland considered against Clark face figure and aforementioned interleaving teachings.

5. Claims 11-33 are further rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Hwang (US6102662) and Averkiou et al (US6186950). The former is directed to high frame rate contrast agent imaging wherein the distinction between the terms 'interleaved' and 'collateral pulses' in relation to scanlines is blurred because both the echo scanlines and intermediates composited from re-sampling and/or interpolation are also referred to as scanlines such that pulses may all serve a collateral function in compositing intermediate scanlines. Additionally, Averkiou et al col. 6 line 52 - col. 7 line - 32 is apparently further suggesting that for purposes of perfusion or low velocity flow measurement, high frame rate techniques may be combined with time interleaving and/or additional three-pulse phase inversion processing to diminish motion artifact.

6. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averkiou et al (US6186950) or Hwang et al (US6102662) so far as the former teaches a method including identifying first signals associated with artifact (col. 3 lines 1-48) with the Examiner arguing that it

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would be inherently obvious for the practitioner to observe same and declare that a motion artifact condition is present, and therefore switching to a mode in which phase inversion is extended to further pulses which replace the simple phase inversion imaging and are a function of these further pulses responsive to the contrast agent, and the latter teaches that upon identification of 'picket fence' artifact due to motion (col. 4 lines 41-44) a filtering substitution can be implemented per col. 4 line 45 - col. 5 line 47..

7. The following art is cited as of interest.. Krishnan et al (US 6,340,548) is cited for its col. 1-2 discussion of LOC imaging. Chiao et al (US 6,216,332) is cited for its col. 9 line 5 - col. 10 line 56 low-flow scanning formats.

8. Any inquiry concerning this communication should be directed to Examiner Francis J. Jaworski at telephone number (703) 308-3061.

  
Francis J. Jaworski  
Primary Examiner

FJJ:fjj

4-12-02